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XVIII.—*Arctic Exploration, with Information respecting Sir John Franklin's missing Party.* By Dr. JOHN RAE, F.R.G.S. (*Gold Medallist.*)

Communicated by the HUDSON BAY COMPANY.

Read, November 13, 1854.

York Factory, Hudson's Bay, September 1st, 1854.

SIR,—I have the honour to report for the information of the Governor, Deputy-Governor, and Committee, that I arrived here yesterday with my party all in good health, but, from causes which will be explained in their proper place, without having effected the object of the Expedition.* At the same time information has been obtained and articles purchased from the natives, which prove beyond a doubt that a portion, if not all, of the then survivors of the long-lost and unfortunate party under Sir John Franklin had met with a fate as melancholy and dreadful as it is possible to imagine.

By a letter, dated Chesterfield Inlet, 9th August, 1853, you are in possession of my proceedings up to that time. Late on the evening of that day we parted company with our small consort, she steering down to the southward, whilst we took the opposite direction towards Repulse Bay.

Light and variable winds sadly retarded our advance northward; but by anchoring during the flood, and sailing or rowing with the ebb tide, we gained some ground daily. On the 11th we met with upwards of three hundred walrus lying on a rock a few miles off shore. They were not at all shy, and several were mortally wounded, but one only (an immensely large fellow) was shot dead by myself. The greater part of the fat was cut off and taken on board, which supplied us abundantly with oil for our lamps all winter.

On the forenoon of the 14th, having a fair wind, we rounded Cape Hope and ran up Repulse Bay; but as the weather was very foggy, completely hiding every object at the distance of $\frac{1}{4}$ of a mile, we made the land about 7 miles east of my old winter quarters. Next day, midst heavy rain, we ran down to North Pole River, moored the boat, and pitched the tents.

The weather being still dark and gloomy, the surrounding country presented a most dreary aspect. Thick masses of ice clung to the shore, whilst immense drifts of snow filled each ravine, and lined every steep bank that had a southerly exposure. No Esquimaux were to be seen, nor any recent traces of them. Appearances could not be less promising for wintering safely, yet I determined to remain until the 1st September, by which date some opinion could be formed as to the practicability of procuring sufficient food and fuel for our support during the winter, all the provisions on board at this time being equal to only three months' consumption.

The weather fortunately improved, and not a moment was lost. Nets were set, hunters were sent out to procure venison, and the majority of the party was constantly employed collecting fuel. By the end of August a supply of the latter essential article (*Andromeda tetragona*) for fourteen weeks was laid up; thirteen deer and one musk bull had been shot, and one hundred and thirty-six salmon caught. Some of the favourite haunts of the Esquimaux had been visited, but no indications were seen to lead us to suppose that they had been lately in the neighbourhood.

The absence of the natives caused me some anxiety, not that I expected any aid from them, but because I could attribute their having abandoned so favourite a locality to no other cause than a scarcity of food, arising from the deer having taken another route in their migrations to and from the north.

On the 1st of September I explained our position to the men, the quantity

* Which was to complete the Survey of the W. Coast of Boothia.—J. R.

of provisions we had, and the prospects, which were far from flattering, of getting more.

They all most readily volunteered to remain, and our preparations for a nine months' winter were continued with unabated energy. The weather, generally speaking, was favourable, and our exertions were so successful that by the end of the month we had a quantity of provisions and fuel collected adequate to our wants up to the period of the spring migrations of the deer.

One hundred and nine deer, one musk ox (including those killed in August), fifty-three brace of ptarmigan, and one seal had been shot, and the nets produced fifty-four salmon. Of larger animals above enumerated, forty-nine deer and the musk ox were shot by myself, twenty-one deer by Mistegan, the deer-hunter, fourteen by another of the men, nine by William Ouligbuck, and sixteen by the remaining four men.

The cold weather set in very early and with great severity. On the 20th all the smaller and some of the larger lakes were covered with ice 4 to 6 inches thick. This was far from advantageous for deer-shooting, as these animals were enabled to cross the country in all directions, instead of following their accustomed passes.

October was very stormy and cold. About the 15th the migrations of the deer terminated, and twenty-five more were added to our stock. Forty-two salmon and twenty trout were caught with nets and hooks set in lakes under the ice. On the 28th the snow was packed hard enough for building, and we were glad to exchange the cold and dismal tents (in which the temperature had latterly been 36° or 37° below the freezing point) for the more comfortable shelter of snow houses, which were built on the S.E.S. side of Beacon Hill, by which they were all protected from the prevailing N.W. gales. The houses were nearly half a mile south of my winter quarters of 1846-7.

The weather in November was comparatively fine, but cold, the highest, lowest, and mean temperature, uncorrected for error of thermometer, being respectively 38° and 18° below zero. Some deer were occasionally seen, but only four were shot; some wolves, several foxes, and one wolverine, were killed, and from the nets fifty-nine salmon and twenty-two trout were obtained.

Our most productive fishery was in a lake about 3 miles distant, bearing E. (magnetic) from Beacon Hill, or the mouth of North Pole River.

The whole of December, a very few days excepted, was one continual gale, with snow and drift. When practicable, the men were occupied scraping under snow for fuel, by which means our stock of that very essential article was kept up. The mean temperature of this month was 23° below zero. The produce of our nets and guns was extremely small, amounting to one partridge, one wolf, and twenty-seven fish.

1854. On the 1st of January the temperature rose to the very unusual height of 18° above zero, the wind at the time being S.E., with snow. Our nets, after being set in different lakes without success, were finally taken up on the 12th, only five fish having been caught. The thermometer was tested by freezing mercury, and found to be in error, the temperature indicated by it being $4^{\circ}5$ too high.

The cold during February was steady and severe, but there were fewer storms than usual. Deer were more numerous, and generally travelling northward; one or two were wounded, but none killed. On two occasions (1st and 27th) that beautiful but rare appearance of the clouds near the sun, with three fringes of pink and green following the outline of the cloud, was seen; and I may add that the same splendid phenomenon was frequently observed during the spring, and was generally followed by a day or two of fine weather.

During the latter part of the month preparations were being made for our spring journeys. A carpenter's workshop was built of snow, and our sledges

were taken to pieces, reduced to as light a weight as possible, and then reunited more securely than before. The mean temperature of February, corrected for error of thermometer, was 39° below zero, the highest and lowest being 20° and 53° .

On the 1st of March a female deer, in fine condition, was shot, and on the 9th and 10th two more were killed. Three men were absent some days during this month in search of Esquimaux, from whom we wished to obtain dogs. They went as far as the head of Ross Bay, but found no traces of these people.

On the 14th I started, with three men hauling sledges, with provisions to be placed in "cache" for the long spring journey. Owing to the stormy state of the weather we got no farther than Cape Lady Pelly, on the most northerly point of which our stores were placed, under a heap of large stones, secure from any animal, except man or the bear. We returned on the 24th, the distance walked altogether being 170 miles.

On the 31st March, leaving three men in charge of the boat and stores, I set out with the other four, including the interpreter, with the view of tracing the W. coast of Boothia from the Castor and Pollux River to Bellot Strait. The weight of our provisions, &c., with those deposited on the way, amounted to 865 lbs.—an ample supply for sixty-five days.

The route followed for part of the journey being exactly the same as that of spring, 1847, it is unnecessary to describe it. During the two first days, although we did not travel more than 15 miles per day, the men found the work extremely hard; and, as I perceived that one of them (a fine active young fellow, but a light weight) would be unable to keep pace with the others, he was sent back, and replaced by Mistegan, a very able man, and an experienced sledge-hauler. More than a day was lost in making this exchange, but there was still abundance of time to complete our work, if not opposed by more than common obstacles.

On the 6th April we arrived at our provision "cache," and found it all safe. Having placed the additional stores on the sledges, which made those of the men weigh more than 160 lbs. each, and my own about 110 lbs., we travelled 7 miles farther, then built a snow-house on the ice 2 miles from shore. We had passed among much rough ice; but hitherto the drift banks of snow, by lying in the same direction in which we were travelling, made the walking tolerably good. As we advanced to the northward, however, these crossed our track (showing that the prevailing winter gales had been from the westward), and, together with stormy weather, impeded us so much that we did not reach Colville Bay until the 10th. The position of our snow house was in lat. $68^{\circ} 13' 5''$ N., long. by chronometer $88^{\circ} 25' 51''$ W., the variation of the compass being $86^{\circ} 20'$ W. From this place it was my intention to strike across land as straight as possible for the Castor and Pollux River.

The 11th was so stormy that we could not move; and the next day, after placing "en cache" two days' provisions, we had walked only 6 miles in a westerly direction, when a gale of wind compelled us to get under shelter. The weather improved in the evening, and, having the benefit of full moon, we started again at a few minutes to 8 p.m. Our course at first was the same as it had been in the morning, but the snow soon became so soft and deep that I turned more to the northward in search of firmer footing. The walking was excessively fatiguing, and would have been so even to persons travelling unencumbered, as we sank at every step knee-deep in snow. Eight and a half miles we accomplished in $6\frac{1}{2}$ hours, at the end of which, as we required some rest, a small snow house was built, and we had some tea and frozen pemican.

After resting 3 hours we resumed our march, and, by making long détours, found the snow occasionally hard enough to support our weight. At 30 minutes to noon on the 13th our day's journey terminated, in lat. $68^{\circ} 23' 30''$

N., long. $89^{\circ} 14' 53''$ W., variation of compass $83^{\circ} 31'$ W. At $1\frac{1}{2}$ mile from our bivouac we had crossed the arm of a lake of considerable extent; but the country around was so flat, and so completely covered with snow, that its limits could not be easily defined, and our snow hut was on the borders of another lake, apparently somewhat smaller.

A snow-storm of great violence raged during the whole of the 14th, which did not prevent us from making an attempt to get forward; after persevering $2\frac{1}{2}$ hours, and gaining $1\frac{1}{2}$ mile distance, we were again forced to take shelter.

The 15th was very beautiful, with a temperature of only 8° below zero. The heavy fall of snow had made the walking and sledge-hauling worse than before. It was impossible to keep a straight course, and we had to turn much out of our way, so as to select the hardest drift-banks. After advancing several miles, we fortunately reached a large lake, containing a number of islands, on one of which I noticed an old Esquimaux tent site. The fresh foot-marks of a partridge (*tetrao ruspectis*) were also seen, being the only signs of living thing (a few tracks of foxes excepted) that we observed since commencing the traverse of this dreary waste of snow-clad country. To the lake above mentioned, and to those seen previously, the name of Barrow was given, as a mark of respect to John Barrow, Esq., of the Admiralty, whose zeal in promoting, and liberality in supporting, many of the expeditions to the Arctic Sea are too well known to require any comment further than that he presented a very valuable Halkett's boat for the service of the party (named by him the James Fitz-James), which unfortunately, by some irregularity in the railway baggage-trains between London and Liverpool, did not reach the latter place in time for the steamer, although sent from London some days before. Our snow-hut was built on the edge of a small lake in lat. $68^{\circ} 31' 38''$ N., long. $89^{\circ} 22' 55''$ W., variation of compass $82^{\circ} 30'$ W.

The difficulties of walking were somewhat diminished on the 16th by a fresh breeze of wind, which drifted the snow off the higher ground, and we were enabled to make a fair day's journey. Early on the 17th we reached the shore of Pelly Bay, but had barely got a view of its rugged ice covering before a dense fog came on, and we had to steer by compass for a large rocky island some miles to the westward, and stopped on an islet near its E. shore until the fog cleared away. This luckily happened some time before noon, and afforded an opportunity of obtaining observations, the results of which were—lat. $68^{\circ} 44' 53''$ N., long. by chronometer $89^{\circ} 45' 47''$, and variation $84^{\circ} 20'$ W. Even on the ice we found the snow soft and deep—a most unusual circumstance. The many detentions I had met with caused me now, instead of making for the Castor and Pollux River, to attempt a direct course towards the Magnetic Pole, should the land W. of this be smooth enough for travelling over. The large island W. of us was so rugged and steep that there was no crossing it with sledges; we therefore travelled along its shore to the northward, and stopped for the night within a few miles of its northern extremity. The track of an Esquimaux sledge, drawn by dogs, was observed to-day, but it was of old date.

The morning of the 18th was very foggy; but after rounding the N. point of the island, it became clear, and we travelled due W., or very nearly so, until within 3 miles of the W. shore of the bay, which presented an appearance so rocky and mountainous that it was evident we could not traverse it without much loss of time. As the country towards the head of the bay looked more level, I turned to the southward, and after a most circuitous walk of more than 16 miles, we built our snow house on the ice 5 miles from shore. Many old traces of Esquimaux were seen on the ice to-day.

On the 19th we continued travelling southward, and our day's journey, about equal to that of yesterday, terminated near the head of the bay.

20th April. The fresh foot-marks of an Esquimaux, with a sledge, having

been seen yesterday on the ice, within a short distance of our resting-place, the interpreter and one man were sent to look for them, the other two being employed in hunting and collecting fuel, whilst I obtained excellent observations, the results of which were—lat. $68^{\circ} 29' 28''$ N.; long., by chronometer, $90^{\circ} 29' 32''$ W.; variation of compass, $98^{\circ} 30'$ W. The latter is apparently erroneous, probably caused by much local attraction.

After an absence of eleven hours, the men sent in search of Esquimaux returned in company with seventeen natives (five of whom were women), and several of them had been at Repulse Bay when I was there in 1847; most of the others had never before seen "whites," and were extremely forward and troublesome. They would give us no information on which any reliance could be placed, and none of them would consent to accompany us for a day or two, although I promised to reward them liberally. Apparently there was a great objection to our travelling across the country in a westerly direction. Finding it was their object to puzzle the interpreter and mislead us, I declined purchasing more than a piece of seal from them, and sent them away, not, however, without some difficulty, as they lingered about with the hope of stealing something; and, notwithstanding our vigilance, succeeded in abstracting from one of the sledges a few pounds of biscuit and grease.

The morning of the 21st was extremely fine, and at 3 A.M. we started across land towards a very conspicuous hill bearing west of us. On a rocky eminence some miles inland, we hid a "cache" of the seal's flesh we had purchased. Whilst doing this our interpreter made an attempt to join his countrymen; fortunately his absence was observed before he had gone back very far, and he was overtaken after a sharp race of 4 or 5 miles. He was in a great fright when we came up to him, and was crying like a child, but expressed his readiness to return, and pleaded sickness as an excuse for his conduct. I believe he was really unwell, probably from having eaten too much boiled seal's flesh, with which he had been regaled at the snow huts of the natives.

Having taken some of the lading off Ouligbuck's sledge, we had barely resumed our journey when we were met by a very intelligent Esquimaux driving a dog's sledge laden with musk-ox beef. This man at once consented to accompany us two days' journey, and in a few minutes had deposited his load on the snow, and was ready to join us. Having explained my object to him, he said that the road by which he had come was the best for us, and having lightened the men's sledges, we travelled with more facility. We were now joined by another of the natives, who had been absent seal-hunting yesterday, but being anxious to see us, had visited our snow-house early this morning, and then followed up our track. This man was very communicative, and on putting to him the usual questions as to his having seen "white men" before, or any ships or boats, he replied in the negative, but said that a party of "Kabloonans" had died of starvation a long distance to the west of where we then were, and beyond a large river. He stated that he did not know the exact place, that he never had been there, and that he could not accompany us so far.

The substance of the information then and subsequently obtained from various sources was to the following effect:—

In the spring, four winters past (1850), whilst some Esquimaux families were killing seals near the north shore of a large island, named in Arrow-smith's charts King William Land, forty white men were seen travelling in company southward over the ice, and dragging a boat and sledges with them. They were passing along the west shore of the above-named island. None of the party could speak the Esquimaux language so well as to be understood, but by signs the natives were led to believe the ship or ships had been crushed by ice, and that they were then going to where they

expected to find deer to shoot. From the appearance of the men (all of whom, with the exception of one officer, were hauling on the drag-ropes of the sledge, and were looking thin) they were then supposed to be getting short of provisions, and they purchased a small seal, or piece of seal, from the natives. The officer was described as being a tall, stout, middle-aged man. When their day's journey terminated they pitched tents to rest in.

At a later date the same season, but previous to the disruption of the ice, the corpses of some thirty persons and some graves were discovered on the continent, and five dead bodies on an island near it, about a long day's journey to the north-west of the mouth of a large stream, which can be no other than Back's Great Fish River (named by the Esquimaux Oot-koo-hi-ca-lik), as its description and that of the low shore in the neighbourhood of Point Ogle and Montreal Island agree exactly with that of Sir George Back. Some of the bodies were in a tent or tents, others were under the boat, which had been turned over to form a shelter, and some lay scattered about in different directions. Of those seen on the island it was supposed that one was that of an officer (chief), as he had a telescope strapped over his shoulders, and his double-barrelled gun lay underneath him. From the mutilated state of many of the bodies, and the contents of the kettles, it is evident that our wretched countrymen had been driven to the last dread alternative as a means of sustaining life. A few of the unfortunate men must have survived until the arrival of the wild fowl (say until the end of May), as shots were heard and fresh bones and feathers of geese were noticed near the scene of the sad event.

There appears to have been an abundant store of ammunition, as the gun-powder was emptied by the natives in a heap on the ground out of the kegs or cases containing it, and a quantity of shot and ball was found below high-water mark, having probably been left on the ice close to the beach before the spring thaw commenced. There must have been a number of telescopes, guns (several of them double-barrelled), watches, compasses, &c., all of which seem to have been broken up, as I saw pieces of these different articles with the natives; and I purchased as many as possible, together with some silver spoons and forks, an order of merit in the form of a star, and a small silver plate engraved "Sir John Franklin, K.C.H."

Enclosed is a list of the principal articles bought, with a note of the initials, and a rough pen-and-ink sketch of the crests on the forks and spoons. The articles themselves I shall have the honour of handing over to you on my arrival in London.

None of the Esquimaux with whom I had communication saw the "white men" either when living or after death, nor had they ever been at the place where the corpses were found, but had their information from natives who had been there, and who had seen the party when travelling over the ice. From what I could learn, there is no reason to suspect that any violence had been offered to the sufferers by the natives.

As the dogs in the sledge were fatigued before they joined us, our day's journey was a short one. Our snow-house was built in lat. $68^{\circ} 29'$ N., and long. $90^{\circ} 53' 42''$ W., on the bed of the river, having high mud banks, and which falls into the west side of Pelly Bay, about lat. $68^{\circ} 47'$ N., and long. $90^{\circ} 36'$ W.

On the 22nd we travelled along the north bank of the river (which I named after Captain Becher of the Admiralty) in a westerly direction for 7 or 8 miles, until abreast of a lofty and peculiarly-shaped hill, already alluded to, and which I named Ellice Mountain, when we turned more to the northward. We soon arrived at a long, narrow lake, on which we encamped, a few miles from its east end, our day's march being little more than 13 miles. Our Esquimaux auxiliaries were now anxious to return, being in dread, or pro-

fessing to be so, that the wolves or wolverines would find their "cache" of meat and destroy it. Having paid them liberally for their aid and information, and having bade them a most friendly farewell, they set out for home as we were preparing for bed.

Next morning provisions for six days were secured under a heap of ponderous stones, and we resumed our march along the lake. Thick weather, snow-storms, and heavy walking, sadly retarded our advance. The Esquimaux had recommended me, after reaching the end of the chain of lakes (which ran in a north-westerly direction for nearly 20 miles, and then turned sharply to the southward), to follow the windings of a brook that flowed from them. This I attempted to do, until finding that we would be led thereby far to the south, we struck across land to the west, among a series of hills and valleys. Tracks of deer now became numerous, and a few traces of musk cattle were observed.

At 2 A.M., on the 26th, we fell upon a river, with banks of mud and gravel 20 to 40 feet high, and about $\frac{1}{4}$ mile in width. After a most laborious walk of more than 18 miles we found an old snow-but, which, after a few repairs, was made habitable, and we were snugly housed at 6 h. 40 m. A.M. Our position was in lat. $68^{\circ} 25' 27''$ N., long. $93^{\circ} 4' 14''$ W.

One of my men, who, from carelessness some weeks before, had severely frozen two of his toes, was now scarcely able to walk; and as, by Esquimaux report, we could not be very far from the sea, I prepared to start in the evening, with two men and four days' provisions, for the Castor and Pollux River, leaving the lame man and another to follow at their leisure a few miles on our track to some rock that lay in our route, where they were more likely to find both fuel and game than on the bare, flat ground where we then were.

The evening of the 26th was very fine as we commenced tracing the course of the river seaward, sometimes following its course, at others travelling on its left or right bank to cut off points. At 4 A.M., on the 27th, we reached the mouth of the river, which, by subsequent observation, I found to be situate in lat. $68^{\circ} 32'$ N., and long. $93^{\circ} 32'$ W. It was rather difficult to discover when we had reached the sea, until a mass of rough ice settled the question beyond a doubt. After leaving the river we walked rapidly due west for 6 miles, then built our usual snug habitation on the ice 3 miles from shore, and had some partridges (*tetrao mutus*) for supper at the unseasonable hour of 8 A.M. We had seen great numbers of these birds during the night. Our lat. was $68^{\circ} 32' 1''$ N., long. $93^{\circ} 44' 48''$ W., being $3' 38''$ N., and about $13'$ E. of Simpson's position of the mouth of the Castor and Pollux River.

The weather was overcast with snow when we resumed our journey at 8 h. 30 m. P.M. On the 27th we directed our course directly for the shore, which we reached after a sharp walk of $1\frac{1}{2}$ h., in doing which we crossed a long stony island of some miles in extent. As by this time it was snowing heavily, I made my men travel on the ice, the walking being better there, whilst I followed the windings of the shore, closely examining every object along the beach.

After passing several heaps of stones which had evidently formed Esquimaux caches, I came to a collection larger than any I had yet seen, and clearly not intended for the protection of property of any kind. The stones, generally speaking, were small, and had been built in the form of a pillar, but the top had fallen down, as the Esquimaux had previously given me to understand was the case.

Calling my men to land, I sent one to trace what looked like a bed of a small river immediately W. of us, whilst I and the other man cleared away the pile of stones in search of a document. Although no document was found, there could be no doubt in my own mind, and in that of my companion, that its

construction was not that of the natives. My belief that we had arrived at the Castor and Pollux River was confirmed, when the person who had been sent to trace the apparent stream bed, returned with the information that it was clearly a river.

My latitude of the Castor and Pollux is $68^{\circ} 28' 37''$ N., agreeing within $\frac{1}{4}$ mile with that of Simpson, but our longitudes differ considerably, his being $94^{\circ} 14'$ W., whilst mine was $93^{\circ} 58'$ W. My longitude is nearly intermediate between that of Simpson and Sir George Back, supposing the latter to have carried on his survey eastward from Montreal Island.*

Having spent upwards of an hour in fruitless search for a memorandum of some kind, we began to retrace our steps, and after a most fatiguing march of fifteen hours, during which we walked at least 30 miles, we arrived at the snow-hut of the men left behind. They had shot nothing, and had not collected sufficient andromeda for cooking, but had been compelled to use some grease. The frost-bitten man could scarcely move.

Early on the morning of the 29th, during a heavy fall of snow, we set out for the mouth of the river, which was named in honour of Sir Roderick Murchison, the late President of the Royal Geographical Society, and, after losing our way occasionally in attempting to make short cuts, we arrived at Cache Island (so named from an Esquimaux cache that was on it), within 2 miles of the sea, at 8 A.M., and stopped there, as it blew a gale with drift.

As soon as we got under shelter and had supped, preparations were made for starting in the evening for Bellot Strait. An ample stock of provisions and fuel for twenty-two days were placed on two of our best sledges, and I hauled on my own small sledge my instruments, books, bedding, &c., as usual.

On the evening of the 29th the weather was so stormy that, although we were prepared to start at 8 o'clock, we could not get away until past 2 on the following morning, when, after travelling little more than 5 miles, a heavy fall of snow and strong wind caused us again to take shelter.

Our advance was so much impeded by thick weather and soft snow that we did not arrive within a few miles of Cape Porter of Sir John Ross until the 6th of May. In doing this we had traversed a bay, the head of which was afterwards found to extend as far N. as lat. $68^{\circ} 54'$ N. Point Sir H. Dryden, its western boundary, is in lat. $68^{\circ} 44'$ N., long. $94^{\circ} 11'$ W. To this bay the name of Shepherd was given, in honour of the Deputy-Governor of the Honourable Hudson's Bay Company, and an island near its head was called Bence Jones, after the distinguished medical man and analytical chemist of that name, to whose kindness I and my party were much indebted for having proposed the use of, and prepared, some extract of tea for the expedition. This article we found extremely portable, and as the tea could be made without boiling water, we often enjoyed a cup of that refreshing beverage, when otherwise from want of fuel we must have been satisfied with cold water.

From Point Dryden the coast, which is low and stony, runs in a succession of small points and bays about 10 miles nearly due W., then turns sharply up to the N. in lat. $68^{\circ} 45'$ N., long. $94^{\circ} 38' 50''$ W., which was ascertained by observations obtained on an island near the shore. The point was called Cape Colville, after the governor of the Company, and the island, Stanley. To the W., at the distance of 7 or 8 miles, land was seen, which received the appellation of Matheson Island, as a mark of respect to one of the directors of the Company.

Our snow hut, on the 6th of May, situate on Point de la Guiche, was, by good observations, found to be in lat. $68^{\circ} 57' 52''$ N., long. $94^{\circ} 32' 58''$ W. One of my men, Mistegan, an Indian of great intelligence and activity, was

* A number of rocky elevations to the north of the river were mistaken by Simpson for islands, and named by him "the Committee."

sent 6 miles farther along the coast northwards. By ascending some rough ice at its extreme point he could see about 5 miles farther. The land was still trending northward, whilst to the N.W., at a considerable distance, perhaps 12 or 14 miles, there was an appearance of land, the channel between which and the point where he stood being full of rough ice. This land, if it was such, is probably part of Matty Island, or King William Land, which latter is also clearly an island.

I am happy to say that on the present, as on a former occasion, where my survey met that of Sir James C. Ross, a very singular agreement exists, considering the circumstances under which our surveys have been taken.

The foggy and snowy weather, which continued for upwards of four days, had occasioned the loss of so much time, that although I could easily have completed a part (perhaps the half) of the survey of the coast between the Magnetic Pole and Bellot Strait, or Brentford Bay, I could not do the whole without great risk to my party, and I therefore decided upon returning.

Having taken possession of our discoveries in the usual form, and built a cairn, we commenced our return on the night of the 6th. Having fine clear weather we made long marches, and at Shepherd Bay, having got rid of the sledge which I had hitherto hauled, I detached myself from the party, and examined the bay within a mile or two of the shore, whilst my men took a straighter route.

Thick weather again came on as we entered the bay (named in honour of Sir Robert H. Inglis) into which the Murchison falls, and we had much trouble in finding the mouth of the river. Here the services of my Cree hunter were of much value, as custom had caused him to notice indications and marks which would have escaped the observation of a person less acute and experienced.

On the 11th of May, at 3 A.M., we reached the place where our two men had been left. Both were as well as I could hope for; the one whose great toe had been frozen, and which was about to slough off at the first joint (thereby rendering the foot very tender and painful when walking in deep snow), had too much spirit to allow himself to be hauled. One deer and eighteen partridges had been shot, but, notwithstanding, I found a greater reduction in our stock of provisions than I had anticipated, and I felt confirmed in the course I had taken.

The day became very fine, and observations were taken which gave the position of "Cache" Island, where our snow-hut was, lat. $68^{\circ} 32' 2''$ N., long. $93^{\circ} 24' 18''$ W.

Having completed my observations, and filled in rough tracings of the coast line, which I generally did from day to day, we started for home at 8:30 P.M. The weather being now fine, and the snow harder than when outward-bound, we advanced more rapidly, and in a straight direction, until we came to the lakes, about midway in the isthmus, after which, as far as Pelly Bay, our outward and homeward routes were exactly alike. We reached Pelly Bay at 1 A.M. on the 17th, and built a snow-house about $2\frac{1}{2}$ miles S., and the same distance W., of my observations of the 20th of April.

Observing traces of Esquimaux, two men were sent after supper to look for them. After eight hours' absence they returned with ten or twelve native men, women, and children. From these people I bought a silver spoon and fork. The initials F. R. M.C., not engraved, but scratched with a sharp instrument on the spoon, puzzled me much, as I knew not at the time the Christian names of the officers of Sir John Franklin's expedition, and thought possibly that the letters above-named might be the initials of Captain M'Clure, the small "c" between the M. C. being omitted.

Two of the Esquimaux (one of them I had seen in 1847) offered for a consideration to accompany us a day or two's march with a sledge and dogs. We

were detained some time by the slow preparation of our new allies, but we soon made up for lost time, and after a journey of 16 geographical, or about $18\frac{1}{2}$ statute miles, we arrived at the E. side of the bay in latitude by reduction to the meridian $68^{\circ} 23' 10''$ N., long. $90^{\circ} 9' 39''$ W.

It may be remembered that in the spring of 1847 I did not trace the shore of Pelly Bay, but saw it from the summit of one of the lofty islands in the bay. Desirous of being always within rather than of exceeding the limits of truth, I, that year, placed the head of the bay about 10 miles N. of what it ought to have been, a mistake which will be easily accounted for by those who know the difficulties of estimating distances in a snow-clad country, where the height of the land is unknown.

The width of the isthmus separating Pelly and Shepherd Bays is fully 60 geographical miles.

In the evening, before parting with our Esquimaux assistants, we bought a dog from them, and after a most friendly farewell resumed our journey eastward, and found on a long lake some old snow-houses, in which we took up our lodgings. Here a set of good observations placed us in lat. $68^{\circ} 12' 18''$ N., long. $89^{\circ} 35' 51''$ W., variation 81° W.

On the morning of the 21st we arrived at Committee Bay: from thence our route to Repulse Bay was almost the same as before, and I shall not therefore advert to it farther than to mention that we arrived at our winter home at 5 A.M., on the 26th of May, having, from the better walking, travelled in twenty days the distance (less 40 or 50 miles) which had taken us thirty-six days to accomplish on our outward journey.

I found the three men who had been left in charge of the property quite well, living in abundance, and on the most friendly terms with a number of Esquimaux families who had pitched their tents near them.

The natives had behaved in the most exemplary manner, and many of them who were short of food, in compliance with my orders to that effect, had been supplied with venison from our stores.

It was from this time until August that I had opportunities of questioning the Esquimaux regarding the information which I had already obtained of the party of whites who had perished of starvation, and of eliciting the particulars connected with that sad event, the substance of which I have already stated.

In the early part of July the salmon came from the sea to the mouths of the rivers and brooks which were at that date open, and we caught numbers of them, so that occasionally we could afford to supply our native friends with fifty or one hundred in a night. As is the usual custom at the Hudson's Bay Company's inland trading posts, all provisions were given gratis, and they were much more gratefully received by the Esquimaux than by the more southerly and more favoured red man.

We had still on hand half of our three months' stock of pemican and a sufficiency of ammunition to provide for the wants of another winter. We were all in excellent health, and could get as many dogs as we required, so that (D.V.) there was little doubt that a second attempt to complete the survey would be successful; but I now thought that I had a higher duty to attend to, that duty being to communicate with as little loss of time as possible the melancholy tidings which I had heard, and thereby save the risk of more valuable lives being jeopardized in a fruitless search in a direction where there was not the slightest prospect of obtaining any information. I trust this will be deemed a sufficiently good reason for my return.

The summer was extremely cold and backward: we could not leave Repulse Bay until the 4th of August, and on the 6th had much difficulty in rounding Cape Hope. From thence, as far as Cape Fullarton, the strait between Southampton Island and the main shore was fully packed with ice,

which gave us great trouble. S. of Cape Fullarton we got into open water. On the evening of the 19th calms and head-winds much retarded us, so that we did not enter Churchill River until the morning of the 28th of August; there we were detained all day by a storm of wind. My good interpreter, William Ouligbuck, was landed, and before bidding him farewell I presented him with a very handsomely mounted hunting-knife, intrusted to me by Captain Sir George Back, for his former travelling companion Ouligbuck, but as the old man was dead I took the liberty of giving it to his son as an inducement to future good conduct, should his services be again required.

A three days' run brought us to York Factory, at which place we landed all well on the forenoon of the 31st of August. I am happy to say that the conduct of my men, under circumstances often very trying, was, generally speaking, extremely good and praiseworthy; and although their wages were higher than those of any party who have hitherto been employed on boat expeditions, I thought it advisable, after consulting with chief factor William Mactavish, to give each a small gratuity, varying the amount according to merit.

In conclusion, I have to express my regret that I was unable on this occasion to bring to a successful termination an expedition which I had myself planned and projected, but in extenuation of my failure I may mention that I was met by an accumulation of obstacles beyond the usual ones of storms and rough ice, which my former experience in Arctic travelling had not led me to anticipate.

I have, &c.
(Signed) JOHN RAE, F.R.G.S.

XIX.—*Remarks on a series of three-hourly Meteorological and other Observations made during a Passage from London to Algoa Bay, from July to October, 1853. By Dr. P. C. SUTHERLAND, F.R.G.S.**

Read, March 12, 1855.

To the SECRETARY of the Royal Geographical Society.

SIR,—I hope you will excuse the liberty I take in forwarding the accompanying “three-hourly” observations in meteorology, &c., made during the passage of the ship ‘Ambassador’ from London to Algoa Bay, South Africa. They extend over a period of nearly four months—July, August, September, and October of this year—and embrace the temperature of the air and of the surface of the sea, together with the density of the latter; the variations of the atmospheric pressure; the true directions of the winds and their force; the general features of the weather; and allusions, made as frequently as circumstances permitted, to the countless inhabitants of the parts of the ocean traversed. As the geographical distribution of animals has always, and more especially of late years, met with marked attention from your Society, I doubt

* The tables are preserved in the archives of the Society.—ED.

